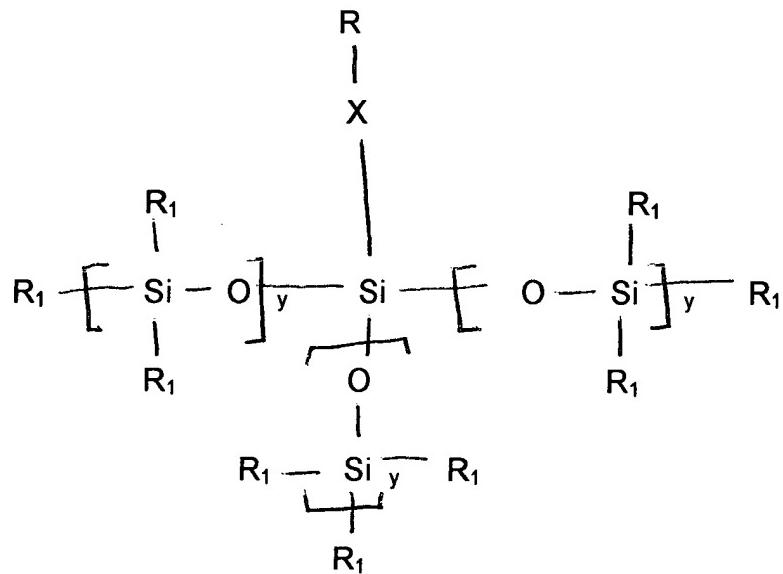


We claim:

1. Siloxysilane monomers comprising:



wherein R is a polymerizable group; X is selected from the group consisting of C₁₋₁₀ alkyl, C₁₋₁₀ alkyloxy, C₆₋₃₆ aryl and C₆₋₃₆ aryloxy; and the R₁ groups may be the same or different selected from the group consisting of C₁₋₁₀ alkyl, C₁₋₂₀ cycloalkyl, C₆₋₃₆ aryl, C₆₋₃₆ aryl ether, C₆₋₃₆ heterocycle, C₆₋₃₆ heterocycle with one or more substituents, C₁₋₁₀ alkyl ether and C₆₋₃₆ aryloxy; and y may be the same or different non-negative integer less than 101.

二〇〇三年十一月三十日

2. The monomer of claim 1 wherein R is selected from the group consisting of methacrylate, acrylate, acrylamido, methacrylamido, styryl, itaconate, fumaroyl, vinyl, vinyloxy, vinyl carbamate and vinyl carbonate.
 3. The monomer of claim 1 wherein R is methacrylate or acrylate.
 4. A method of making the siloxysilane monomer of claim 1 comprising:
producing, through co-hydrolysis of a chlorosilane with a chlorophenylsilane and an acid scavenger, a siloxysilane monomer.
 5. The method of claim 4 wherein said chlorosilane is 3-methacryloyloxypropylchlorosilane.
 6. The method of claim 4 wherein said acid scavenger is N,N-dimethylaminopyridine.

- Sub
a7*
7. A polymeric composition produced through the polymerization of one or more monomers of claim 1.
 8. A polymeric composition produced through the copolymerization of one or more monomers of claim 1 with one or more aromatic or non-aromatic non-siloxyl-based monomers.
 9. A polymeric composition produced through the copolymerization of one or more monomers of claim 1 with one or more hydrophobic monomers.
 10. A polymeric composition produced through the copolymerization of one or more monomers of claim 1 with one or more hydrophilic monomers.

- SUB
A7
11. The polymeric composition of claim 8 wherein said one or more aromatic or non-aromatic non-siloxy-based monomers are selected from the group consisting of 2-phenyloxyethyl methacrylate, 3,3-diphenylpropyl methacrylate, glyceryl methacrylate, 3-phenylpropyl acrylate, N,N-dimethylacrylamide, methyl methacrylate, 2-(1-naphthylethyl methacrylate) and 2-(2-naphthylethyl methacrylate).
 12. The polymeric composition of claim 9 wherein said one or more hydrophobic monomers are selected from the group consisting of 2-ethylhexyl methacrylate, 3-methacryloyloxypropylidiphenylmethysilane and 2-phenyloxyethyl methacrylate.
 13. The polymeric composition of claim 10 wherein said one or more hydrophilic monomers are selected from the group consisting of N,N-dimethylacrylamide and N-methylacrylamide.

- TOEPLITZ ESTATE
14. A method of producing ophthalmic devices from the polymeric compositions of claim 7, 8, 9 or 10 comprising:
 - casting one or more polymeric compositions in the form of a rod;
 - lathing or machining said rod into disks; and
 - lathing or machining said disks into ophthalmic devices.
 15. A method of producing ophthalmic devices from the polymeric compositions of claim 7, 8, 9 or 10 comprising:
 - pouring one or more polymeric compositions into a mold prior to curing;
 - curing said one or more polymeric compositions; and
 - removing said one or more polymeric compositions from said mold following curing thereof.
 16. A method of using the ophthalmic devices of claim 14 or 15 comprising:
 - making an incision in the cornea of an eye; and
 - implanting said ophthalmic device within the eye.

17. The method of claim 14, 15 or 16 wherein said devices are intraocular lenses or corneal inlays.
18. The method of claim 14 or 15 wherein said devices are contact lenses.
19. A polymeric composition produced through the copolymerization of one or more monomers of claim 1 with one or more aromatic or non-aromatic non-siloxy-based monomers and one or more strengthening agents.
- SUB
a)* 20. A polymeric composition produced through the copolymerization of one or more monomers of claim 1 with one or more hydrophobic monomers and one or more strengthening agents.
21. A polymeric composition produced through the copolymerization of one or more monomers of claim 1 with one or more hydrophilic monomers and one or more strengthening agents.

22. A polymeric composition produced through the polymerization of one or more monomers of claim 1 with one or more strengthening agents.
23. A polymeric composition produced through the copolymerization of one or more monomers of claim 1 with one or more aromatic or non-aromatic non-siloxyl-based monomers and one or more crosslinking agents.
- SUB
a17*
24. A polymeric composition produced through the copolymerization of one or more monomers of claim 1 with one or more hydrophobic monomers and one or more crosslinking agents.
25. A polymeric composition produced through the copolymerization of one or more monomers of claim 1 with one or more hydrophilic monomers and one or more crosslinking agents.

26. A polymeric composition produced through the polymerization of one or more monomers of claim 1 with one or more crosslinking agents.

27. The polymeric composition of claim 19, 20, 21 or 22 wherein said one or more strengthening agents are selected from the group consisting of cycloalkyl acrylates and methacrylates.

*Sub
a17*

28. The polymeric composition of claim 23, 24, 25 or 26 wherein said one or more crosslinking agents are selected from the group consisting of diacrylates and dimethacrylates of triethylene glycol, butylene glycol, neopentyl glycol, ethylene glycol, hexane-1,6-diol and thio-diethylene glycol, trimethylolpropane triacrylate, N,N'-dihydroxyethylene bisacrylamide, diallyl phthalate, triallyl cyanurate, divinylbenzene; ethylene glycol divinyl ether, N,N'-methylene-bis-(meth)acrylamide, sulfonated divinylbenzene and divinylsulfone.